also discloses receiving, from a remote computer and at a device having a unique network address that is different from the network address of any of the servers, a packet-based message comprising a request for a service session. Finally with respect to Bruck, the Examiner contended that Bruck discloses assigning one of the several servers (206, 208, 210 and 212) to be used by the remote computer in the service session and transmitting to the remote computer a packet-based message comprising the unique network address of the assigned server (using dynamically assignable IP addresses for each subnet) for the remote user to address subsequent messages during the service session. On this latter point, the Examiner referred to Figure 3 and column 7, line 11 to column 8, line 49.

The Examiner stated that Bruck does not specifically disclose a real network address of a server. The Examiner contended, however, that Brendel in the same network environment discloses a real network address of a server. The Examiner contended it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement Brendel's teaching into the computer system of Bruck to process data information because it would have enabled routers to use the real Internet Protocol (IP) address of the assigned server to route data packets to the assigned server, and thus, the Examiner contended, balance the load on each server in a communications network. The Examiner employed similar rationale in rejecting claims 17, 30 and 35.

Applicant respectfully disagrees with the Examiner's obviousness analysis, and submits that each of the independent claims 1, 17, 30 and 35 defines an invention that is patentable over the prior art.

Independent claim 1, for example, is directed to a method of providing a remote networked computer with a service session using one of a plurality of similarly functioning software applications residing on different servers with different unique real addresses. The method includes receiving, from the remote computer and at a device having a unique network address that is different from the network address of any of the servers, a packet-based message comprising a request for a service session. The method also includes assigning one of several servers to be used by the remote computer in the service session. The method also includes

transmitting, to the remote computer, a packet-based message comprising the unique real network address of the assigned server for the remote user to address subsequent messages during a service session.

Bruck discloses a load balancing server system having multiple machines (e.g., 206, 208, 210 and 212) that function as a front-end server layer (or server cluster) between a network (such as the Internet 202) and a back-end server layer 204 having multiple machines 220, 222, 224 and 226 functioning as Web file servers, FTP servers, or other application servers. (Abstract; col. 6, lns. 25-44; Figure 2.) The front layer machines perform dynamic load balancing for both server layers. (Col. 2, lns. 44-46.) As shown in Figure 3, a server cluster 310 may be disposed between an external subnet 312 and internal subnets 316 and 318. (Col. 7, lines 15-19). Bruck discloses that the machines 302, 304, 306 and 308 of the server cluster 310 maintain a set of dynamically assignable IP addresses, referred to as a virtual IP pool (VIP), for each subnet 312, 316 and 318. (Col. 8, lines 1-5). Bruck further discloses that each of the server cluster machines is associated with a primary IP address and with a virtual IP address for each subnet. (Col. 8, lines 9-14.) Bruck discloses that users or host machines on both sides of the server cluster 310 will know of and will direct data packets to an address in one of the virtual IP pools, rather than the primary IP address associated with each server cluster machine. (Col. 8, lines 17-22). Bruck discloses that dynamic assignment of the virtual IP addresses permits reconfiguration in response to machine problems and in response to variations in network traffic loading among the machines. (Col. 8, lns. 34-38.)

Brendel discloses a multi-mode server that includes a load balancer that receives all requests from clients because they use a virtual address for the entire site. (Abstract.) Brendel discloses that a real IP address of an assigned server is used when multiple hops are required to reach an assigned server. (Col. 16, lines 46-47.) Brendel further discloses that the destination IP address of the packets from the load balancer to the assigned server are modified to have the assigned server's real IP address rather than a virtual IP address. (Col. 16, lns. 49-50.) Thus, Brendel explains, intermediate routers can use the real IP address of an assigned server to route

the packet to the assigned server (col. 16, lns. 53-54), but again, only after the load balancer receives the request with a virtual address for the entire site (Abstract).

Applicant submits that the teachings of Bruck and Brendel, either taken alone or the two in combination, does not render claim 1 obvious. In particular, neither Bruck nor Brendel discloses a method wherein a message comprising a unique real network address of an assigned server for a service session is transmitted to a remote computer (for the remote user to address later messages during the service session), as is required by Applicant's claim 1. This claimed transmission in Applicant's claimed method of the assigned server's unique real network address enables the service session to be conducted directly between the remote computer and the assigned server, instead of through the device (e.g., load balancer) that initially received the message comprising the request for a service session.

The Examiner's obviousness positions miss the mark. The fact that a real network address is disclosed and used in the Brendel system to route packets from a load balancer to an assigned server is irrelevant to Applicant's claim 1, in which the real network address of the assigned server is transmitted to the remote computer. Such a transmission is not disclosed in either Bruck or Brendel. The claimed transmission, as mentioned previously, is performed so that a load balancer is avoided altogether in subsequent transmissions from the remote computer to the assigned server during the service session, and hence the load balancer does not become a bottleneck.

In addition, Bruck and Brendel both teach away from the remote computer using the real network addresses of an assigned server during a service session. First, in both Bruck and Brendel, all of a remote user's transmissions are directed to the server system's load balancer (or load-balancing "front layer server system" as it is called in Bruck). Again, this is different from Applicant's claim 1, where subsequent transmissions of the service session are addressed directly to the assigned server. This difference provides advantages not contemplated in the prior art. For example, use of the claimed method prevents a load balancer from becoming a bottleneck in a service session, and avoids the latency problems and inefficient use associated with unnecessarily routing traffic through a load balancer.

Independent claims 17, 30 and 35 are each patentable over the combination of Bruck and Brendel for similar reasons. Claims 17, 30 and 35 each require the transmission of a message comprising a unique real network address of an assigned server to a remote computer for a remote user to address subsequent messages during a service session.

Accordingly, independent claims 1, 17, 30 and 35 define an invention over the prior art, and Applicant requests that the rejections be removed. Furthermore, claims 2-16, 18-29, 31-34 and 36-40 depend directly or indirectly from claims 1, 17, 30 and 35, and are therefore also allowable.

Conclusion

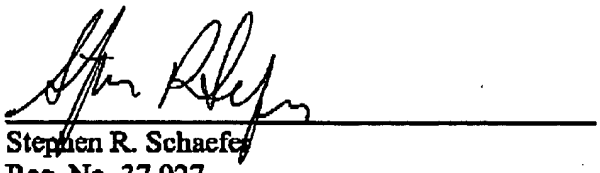
Applicant submits that claims 1-40 are in condition for allowance, and respectfully requests that the Examiner issue a notice of allowance.

It is believed that all of the pending claims have been addressed. However, the absence of a reply to a specific rejection, issue or comment does not signify agreement with or concession of that rejection, issue or comment. In addition, because the arguments made above may not be exhaustive, there may be reasons for patentability of any or all pending claims (or other claims) that have not been expressed. Finally, nothing in this paper should be construed as an intent to concede any issue with regard to any claim, except as specifically stated in this paper, and the amendment of any claim does not necessarily signify concession of unpatentability of the claim prior to its amendment.

No fee is believed to be owed for this Response. Please apply any other charges or credits to deposit account 06-1050.

Respectfully submitted,

Date: July 6, 2005



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